



COUNTY OF SAN DIEGO
Great Government Through the General Management System – Quality, Timeliness, Value
DEPARTMENT OF HUMAN RESOURCES

CLASS SPECIFICATION

CLASSIFIED

ASSISTANT AIR POLLUTION CHEMIST
ASSOCIATE AIR POLLUTION CHEMIST

Class No. 003858
Class No. 003845

■ CLASSIFICATION PURPOSE

To perform professional work involved in the collection, evaluation, and chemical analysis of air contaminant samples; and to perform related work as required.

■ DISTINGUISHING CHARACTERISTICS

This is a professional chemist class series allocated to the Air Pollution Control District (APCD), Monitoring and Technician Services Division.

Assistant Air Pollution Chemist:

This is the entry-level class in the Air Pollution Chemist series. Under general supervision, an Assistant Air Pollution Chemist performs routine analyses and testing of air contaminant samples.

Associate Air Pollution Chemist:

This is the journey level class in the Air Pollution Chemist series. Under general supervision, incumbents perform the full range of chemical analyses and evaluations of air contaminant samples. This class differs from the next higher class, Senior Air Pollution Chemist, in that the latter provides first-line supervision over a section of Air Pollution Chemists and makes final decisions concerning the methodology and procedures to be used in the analysis and testing of samples.

■ FUNCTIONS

The examples of functions listed in the class specification(s) are representative but not necessarily exhaustive or descriptive of any one position in the class(es). Management is not precluded from assigning other related functions not listed herein if such functions are a logical assignment for the position.

Essential Functions:

Assistant Air Pollution Chemist

1. Performs chemical compliance testing and analyses of air contaminant samples in connection with ambient air monitoring and other industrial source testing programs.
2. Utilizes quantitative, qualitative, and other chemical instrumentation methods to identify and determine the concentration of air contaminants from liquid, solid, and gaseous materials.
3. Reviews concentrations to ensure compliance with local, State, and Federal air quality laws, regulations, and guidelines.
4. Conducts tests at stationary air pollution sources and air monitoring stations utilizing a mobile testing laboratory.
5. Utilizes mathematical and statistical principles to perform calculations.
6. Prepares detailed technical reports and maintains records.
7. Operates, calibrates, and maintains a variety of chemical and electronic instruments.
8. Participates in quality control and quality assurance tasks.
9. Reviews testing by a contractor and obtains field samples.
10. Provides assistance as required on special projects.

Associate Air Pollution Chemist

All the functions listed above and

1. Collects and performs laboratory analysis of unique samples to ensure compliance with strict local, State, and Federal air quality guidelines.
2. Implements and assists in the development of quality control and quality assurance procedures.
3. Conducts research to improve and develop analytical techniques, including methodologies, procedures, and the application of instruments to analyses.
4. Provides supervision, training, and technical guidance to Assistant Air Pollution Chemists and technicians during samples testing and analysis as needed.

■ KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of:

The following apply to all classes:

- Quantitative and qualitative analytical methods used to perform chemical analyses.
- Principles and practices of the application of instruments to analyze organic and inorganic substances and compounds.
- Principles of algebra and calculus.
- Principles, procedures, and methods used in laboratory and field-testing, sampling, analyzing, and reporting results.
- The operation, use, and maintenance of chemical analysis equipment used in sampling air contaminants.
- Principles of mathematics including algebra, calculus, and statistics.
- Air pollution control laws, regulations, and guidelines.

Skills and Abilities to:

The following apply to all classes:

- Perform chemical compliance, field and laboratory testing, and analyses of air contaminant samples in connection with ambient air monitoring and other industrial source testing programs.
- Utilize quantitative, qualitative, and other chemical instrumentation methods to identify and determine the concentration of air contaminants.
- Review air sample concentrations to ensure compliance with local, State, and Federal air quality laws, regulations, and guidelines.
- Identify and analyze technical problems in air pollution chemistry.
- Operate, maintain, and calibrate laboratory and field instruments.
- Prepare detailed technical written reports, and maintain records.
- Perform scientific and mathematical calculations.
- Effectively communicate in oral and written form.
- Establish and maintain effective working and diplomatic relations with the public and private agencies.

Associate Air Pollution Chemist:

- Collect and perform laboratory analysis of unique samples to ensure compliance with local, State, and Federal air quality regulations and guidelines.
- Implement and assist in developing quality control and quality assurance procedures.
- Conduct research to improve and develop analytical techniques, including methodologies, procedures, and the application of instruments to analyses.
- Provide training and technical guidance to Assistant Air Pollution Chemist and technicians during sample testing and analysis.

■ EDUCATION/EXPERIENCE

Education, training, and/or experience that demonstrate possession of the knowledge, skills and abilities listed above. Examples of qualifying education/experience are:

Assistant Air Pollution Chemist:

1. A Bachelor's degree from an accredited college or university, in chemistry, chemical engineering, or a closely related field, which includes the completion of thirty (30) semester units or forty-five (45) quarter units of physical, analytical, and organic chemistry, AND, one (1) year of progressively responsible professional experience in collecting, evaluating, and conducting chemical analysis of air contaminant samples, OR

2. A master's degree as stated above in chemistry or chemical engineering.

Associate Air Pollution Chemist:

1. A bachelor's degree from an accredited college or university in chemistry, chemical engineering, or a closely related field, which includes the completion of thirty (30) semester units or forty-five (45) quarter units of physical, analytical, and organic chemistry, AND, two (2) year of progressively responsible professional experience in collecting, evaluating, and conducting chemical analysis of air contaminant samples, OR
2. A master's degree as stated above in chemistry or chemical engineering; AND, one (1) year of progressively responsible professional experience in collecting, evaluating and conducting chemical analysis of air contaminant samples, OR
3. One (1) year of experience as an Assistant Air Pollution Chemist for the County of San Diego Air Pollution Control District.

■ ESSENTIAL PHYSICAL CHARACTERISTICS

The physical characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of the classification(s). Reasonable accommodation may be made to enable an individual with qualified disabilities to perform the essential functions of a job, on a case-by-case basis.

Continuous upward and downward flexion of the neck. Frequent: sitting, repetitive use of hands to operate computers, printers and copiers, walking, standing, simple and power grasping, reaching above and below shoulder level, pushing and pulling, equipment. Occasional: bending and twisting of neck, bending and twisting of waist, squatting, climbing, kneeling, and crawling. Ability to climb ladders and work at heights of 250+ feet. Must have acceptable visual acuity for color. Incumbents use physical strength and agility on a continual basis, including lifting objects frequently weighing up to 50 pounds, and occasionally weighing up to 70 pounds. Incumbents may be required to climb ladders and conduct work at elevated heights

■ SPECIAL NOTES, LICENSES, OR REQUIREMENTS

License

A valid California class C driver's license, which must be maintained throughout employment in this class, is required at time of appointment.

Certification/Registration

None Required.

Working Conditions

Office environment; exposure to computer screens. Works at heights over 250 feet above ground. Required to work early morning hours. Exposed to all weather conditions. May be exposed to noxious fumes, dirt, heat, and noise

Background Investigation

Must have a reputation for honesty and trustworthiness. Misdemeanor and/or felony convictions may be disqualifying depending on type, number, severity, and recency. Prior to appointment, candidates will be subject to a background investigation.

Probationary Period

Incumbents appointed to permanent positions in these classes shall serve a probationary period of 12 months (Civil Service Rule 4.2.5).

New: June 12, 1963 (Associate Air Pollution Chemist)
New: August 30, 1983 (Assistant Air Pollution Chemist)
Revised: December 6, 1995
Reviewed: Spring 2003
Revised: June 14, 2004
Revised: June 23, 2006

Assistant Air Pollution Chemist (Class No. 003858)
Associate Air Pollution Chemist (Class No. 003845)

Union Code: PR
Union Code: PR

Variable Entry: Y
Variable Entry: Y